

WHAT IS CLAIMED IS:

- Sub
A1
1. A multilayer ultrathin film which comprises layers of a polymer and layers of lamina particles alternately assembled, said lamina particles are obtained by exfoliating microcrystals of a layered titanium oxide.
2. The ultrathin film according to Claim 1, wherein the lamina particles are titania nanosheets having a compositional formula of $Ti_{1-\delta}O_2$ ($0 \leq \delta \leq 0.5$).
3. The ultrathin film according to Claim 1, of which the film thickness can be controlled within a range of from sub-nm to nm.
4. The ultrathin film according to Claim 1, which absorbs ultraviolet light having a wavelength of at most 300 nm with a high efficiency.
5. A method for producing the titania ultrathin film as defined in Claim 1, which comprises repeatedly soaking a substrate alternately in a sol having titania nanosheets suspended and in a cationic polymer solution so that the nanosheets and the polymer are adsorbed on the substrate each in a thickness of from sub-nm to nm level to form a multilayer having said components alternately accumulated.
- ADD A3

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A2